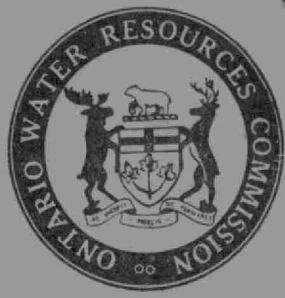


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TOWNSHIP OF ESQUESING - 1968
COUNTY OF HALTON

THE

ONTARIO WATER RESOURCES

COMMISSION

WATER POLLUTION SURVEY

of the

TOWNSHIP OF ESQUESING

in the

COUNTY OF HALTON

1968

TD
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TD
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Report on a water quality
survey of the township of
Esquesing, county of Halton.
80326

Report

on a

Water Pollution Survey

of the

TOWNSHIP OF ESQUESING

County of Halton

March, 1968

District Engineers Branch

Division of Sanitary Engineering

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R E P O R T

THE ONTARIO WATER RESOURCES COMMISSION

INTRODUCTION

A water pollution survey was made of the Township of Esquesing on July 27, 1967. The purpose of the survey was to locate and record all significant sources of pollution within the township. Such surveys are performed routinely by the Ontario Water Resources Commission as a basis for evaluating all existing and potential sources of pollution. When sources of pollution are found, corrective action is requested by the Commission. Where water and/or pollution control works appear desirable or expansions to present facilities are necessary, the Commission has a programme to aid in the construction of these works.

The information received from Mr.K.C. Lindsay, Township Clerk-Treasurer, is gratefully acknowledged.

I GENERAL

The Township of Esquesing, located in the northeast portion of the County of Halton, had a 1966 assessed population of 7,599 (1967 Municipal Directory). It is predominantly a rural township with the population concentrated in communities such as Glen Williams (900), Milton Heights (225), Peru (33) and Norval (350). A portion of the community of Milton Heights is located in the Township of Nassagaweya.

The township land consisting of 66,071 acres, is flat to rolling and composed chiefly of clayey or sandy till with local interbeds of sand and gravel. Drainage is provided by Oakville Creek and the Credit River.

The land is used primarily for dairy farming. Industrial development includes an apple-canning factory, a knitting mill, brick factory, dressed meat plant, a number of limestone quarries and sand and gravel pits.

II WATER USES

1. Private

There are no municipal water works systems in the township. The populace relies on individual drilled and dug well supplies. Reportedly, some well supplies in the communities of Glen Williams, Milton Heights and Peru are contaminated and communal systems are needed in these areas.

2. Industrial

(i) Apple Products (Glen Williams) Limited - Water for industrial purposes at this cannery is obtained from an underground spring and a drilled well supply. The plant operates for a 5-month period beginning in October of each year.

(ii) Beaumont Knitting Co. Ltd. (Glen Williams) - This plant, operating on a year-round basis, manufactures heavy work socks, of which wool, cotton and synthetic fibres, such as rayon and nylon, are the raw materials. A total of 2,500 gallons per day are

pumped from the Credit River and used for processing.

(iii) R.A. Davis Piggery - Water is obtained from drilled well supplies. The total consumption is not known.

(iv) Miscellaneous - The Acton Limestone Quarries Limited and sand and gravel quarries in the township have dry industrial processes. However, the sand and gravel pits may from time to time utilize water from small watercourses.

3. Recreational

Two of the better known areas in the township for public swimming are Water Falls Playground and Terra Cotta Conservation Area.

The Water Falls Playground uses a tributary of Black Creek and Terra Cotta Conservation Area, a tributary of the Credit River. The water quality of the swimming areas was reported to be satisfactory by the Halton County Health Unit. Some fishing is done in Oakville Creek and the Credit River.

III POLLUTION CONTROL

1. Sanitary Waste Disposal

There are no communal sewage works systems in the township except those serving the incorporated towns. Domestic sewage in the communities and farm areas is treated by individual septic-tank and tile-bed systems and pit privies.

2. Industrial Waste Disposal

(i) Apple Products (Glen Williams) Limited - A total of 9,200 gpd of wastewater is discharged from the plant. Cooling water (6,000 gpd) is discharged directly to a drainage ditch which outfalls to the Credit River. The process water (3,000 gpd) is directed through a shaker screen and then to a 7,000 gallon settling tank. Effluent from the tank discharges to the ditch containing the cooling water. Wash-up water from the peel and core section (200 gpd) discharges to a holding tank where the wastes are then hauled away by truck.

(ii) Beaumont Knitting Co. Ltd. (Glen Williams) - The wastewaters from this plant are discharged to the Credit River without treatment. The wastes consist of bleach and wash solutions and rinses after each wash. The approximate total of the waste is 2,500 gpd.

(iii) R.A. Davis Piggery - Approximately 1,000 hogs are raised in three barn areas located near a small watercourse that is a tributary of Oakville Creek. Flow in the small watercourse is intermittent and during dry weather there is no flow at all. Leachate from the manure piles flows to the tributary. Construction of new barns located away from the watercourse has begun and eventually will eliminate the leachate from gaining access to the watercourse.

Liquid manure will then be spread on fields when construction has been completed.

(iv) Meadowglen Mushroom Growers Limited - The Meadowglen Mushroom Growers plant is located in the Town of Georgetown and is adjacent to the community of Glen Williams.

Leachate from a compost pile on the plant's property is directed to a holding pond. The contents of this pond are then discharged to a nearby field during dry weather. However, when heavy rainfalls or periods of maximum surface runoff occur, effluent from the pond gains access to roadside ditches and residential property in Glen Williams resulting in the pollution of private well supplies.

The problem of waste disposal at the plant will be studied by the OWRC Division of Industrial Wastes in the spring of 1968.

IV PRESENTATION OF SAMPLE RESULTS

The laboratory results of the bacteriological examinations and chemical analyses of samples collected from the watercourses and outfalls are contained in the tables appended to this report. A description of the significance of the laboratory tests and a summary of water-quality objectives are also included.

Samples collected of the final waste effluent from Apple Products Limited showed a 5-Day BOD and suspended solids concentration in excess of the OWRC recommended limits of 15 ppm for each. The discharge from the plant also contains a high coliform density.

Bacteriological examination of a sample from the Credit River downstream from the plant outfall indicated that the discharge is adversely affecting the water quality.

An OWRC industrial wastes survey of the Beaumont Knitting Company Limited has shown that the waste discharges from the knitting mill contain a BOD, suspended solids concentration and an ether soluble content above the OWRC maximum objectives and are unsatisfactory for discharge to a watercourse. Reportedly, there are also intermittent high levels of foam and discolouration along the east bank of the Credit River. A bacteriological sample collected downstream from the outfall showed a coliform count greater than the recommended limit of 2,400 coliforms per 100 ml.

V DISCUSSION

In the 1965 Water Resources Survey Report of the County of Halton, three recommendations were made pertaining to water supply and water pollution control:

1. The establishment of a municipal water works system should be considered for the community of Glen Williams.
2. The Glen Knitting Mills Limited, the Beaumont Knitting Company Limited, and the Apple Products (Glen Williams) Limited should provide satisfactory wastewater treatment.
3. Consideration should be given to the establishment of a sanitary sewerage system for the community of Glen Williams.

A sanitary survey was conducted in the central part of the community of Glen Williams by the Halton County Health Unit in 1957. Fifty-three residences were visited and 52 well supplies were inspected. One family had no well. The survey revealed that 27 of

the wells were unsatisfactory according to either their location, construction or bacteriological sample results.

An OWRC feasibility study for supplying Glen Williams with water from Georgetown and installing a water distribution system was prepared in September, 1960. No further development of the project has taken place although there is still a need for a safe water supply in the community.

The Glen Knitting Mills originally located in Glen Williams has since moved operations to the Town of Georgetown. All liquid wastes are discharged to the Georgetown municipal sewerage system and no pollution problems exist as a result. Problems still remain in Glen Williams with the waste discharges to the Credit River from the Beaumont Knitting Company Limited and Apple Products Limited. In both cases there is limited land available for conventional treatment of the wastes at the plants and the only practical means of abating water pollution would be a municipal sewage works system or a common sewer line from the plants to the Georgetown system.

A survey of the private wells in the communities of Milton Heights and Peru by the Halton County Health Unit indicated that the majority of the wells are contaminated. A cost feasibility study by the OWRC for supplying the communities with water from an existing pipeline owned by the Town of Milton between the Kelso Dam well and Milton was made in 1967. The townships of Esquesing and Nassagaweya approached the Town of Milton to enter into an agreement for water

from the Milton system. However, permission was refused by the town. In spite of this, the townships should continue their efforts to provide a communal water supply for Milton Heights and Peru.

VI COMMUNITY PLANNING

The Township of Esquesing should adopt a comprehensive plan through which council may establish and govern the future development of the township. Such a plan would provide for the passing of by-laws to regulate building and the use of land, and for providing suitable public services such as schools, parks, roads, and water and sewage works. Water and sewage services will be required and some idea must be known by council as to when, where, and how these services will be provided.

It is therefore recommended that council prepare and adopt an Official Plan, approved by the Minister of Municipal Affairs.

VII REFUSE DISPOSAL

The township refuse disposal site is located on Lot 25, Concession IV and is approximately 3 acres in area. A burn and cover type of operation is employed and a municipal by-law preventing the dumping of liquid industrial wastes is enforced. As a result of the operation of the dump, no water pollution problems have existed.

VIII SUMMARY AND CONCLUSIONS

A water pollution survey was conducted in the Township of Esquesing on July 27, 1967.

There are no municipal water works or sewage works systems located in the township except for those located in the incorporated towns.

Council does not have an Official Plan for the Township of Esquesing which sets out the policies of council with regard to the future development of the township. An Official Plan would aid in establishing future water and sewage works requirements.

Domestic water for residences is provided by individual well supplies. In some communities as Glen Williams, Milton Heights and Peru, surveys conducted by the Halton County Health Unit have indicated that most of the wells are contaminated. With this in mind, safe communal water supplies should be developed in these areas.


Sewage is treated by septic-tank and tile-bed systems and pit privies. Apple Products Limited and Beaumont Knitting Company Limited, located in Glen Williams discharge untreated wastes to the Credit River resulting in the deterioration of the water quality downstream from the outfalls. As there is limited available land space for treatment of the wastes at each plant, a municipal sanitary sewer system should be developed in the community of Glen Williams to collect industrial and domestic wastes for discharge to the Town of Georgetown sanitary sewer system. If a municipal system cannot be provided, the industries should investigate the possibility of constructing a common sewer to the Georgetown sanitary sewer system.

IX RECOMMENDATIONS

1. Every effort should be made by the Township of Esquesing in conjunction with the Township of Nassagaweya to develop a communal water works system for the communities of Milton Heights and Peru.
2. Consideration should be given to the establishment of a municipal water works system for the community of Glen Williams.
3. A municipal sanitary sewer system should be provided for the community of Glen Williams to collect domestic and industrial wastes for discharge to the Town of Georgetown sanitary sewer system.
4. If a sewage works project is not developed in Glen Williams, Apple Products Limited and Beaumont Knitting Company Limited should study the feasibility of constructing a common sewer from the plants to the Georgetown sanitary sewer system.
5. The Township of Esquesing should prepare and adopt an Official Plan, approved by the Minister of Municipal Affairs.

/elc

Prepared by:


G.K. Boretski,
Civil Technologist,
Div. of Sanitary Engineering.

APPENDIX

WATER QUALITY AND EFFLUENT OBJECTIVES

The OWRC objectives for surface waters in Ontario are as follows:

5-day BOD - not greater than 4 ppm
Total Coliform Count - not greater than
2,400 coliforms per 100 ml
Phenolic Equivalents - Average - not greater than 2 ppb
- Maximum - not greater than 5 ppb

pH Range - 6.7 to 8.5

A few pertinent maximum limits of contaminants in storm sewers, sewage treatment plant and industrial effluents are listed below. Adequate protection for surface waters except in certain specific instances influenced by local conditions, should be provided if the following concentrations and pH range are not exceeded.

5-day BOD - not greater than 15 ppm
Suspended Solids - not greater than 15 ppm
Phenols - not greater than 20 ppb
pH - 5.5 to 10.6
Iron - not greater than 17 ppm
Ether Solubles (Oil) - not greater than 15 ppm

GLOSSARY OF TERMS

Bacteriological Examinations - The Membrane Filter (MF) Technique is used by the OWRC to obtain a direct count of coliform organisms. These organisms are the normal inhabitants of the intestines of man and other warm-blooded animals. They are always present in large numbers in untreated sewage and are, in general, relatively few in number in other stream pollutants.

Biochemical Oxygen Demand (BOD) - The biochemical oxygen demand test indicates the amount of oxygen required for stabilization of the decomposable organic matter found in sewage effluent, polluted waters, or industrial wastes, by aerobic biochemical action.

Solids - The analyses for solids include tests for total, suspended and dissolved solids. The total solids is a measure of the solids in solution and in suspension. Suspended solids indicate the measure of undissolved solids of organic or inorganic nature whereas the dissolved solids are a measure of those solids in solution.

Oils and Ether Soluble Materials - These include oils and all other soluble materials such as tarry substances and greases. The presence of these pollutants renders water difficult and sometimes impractical to treat either for industrial or domestic use. Oils make streams unsightly and water unfit for bathing.

Phenolic Compounds - Phenols react with chlorine to produce intensely aromatic compounds. These compounds, even when highly diluted, may give a taste and odour to the water which is variously described as medicinal, chemical or iodoform. Phenols taint fish and are toxic to fish, depending on the concentration. Normal water contains no phenolic compounds.

Alkyl Benzene Sulfonate (ABS) - The alkyl benzene sulfonate portion of the anionic detergents is reported in ppm. The test is generally employed to indicate the presence of domestic wastewater. The popular use of synthetic detergent for general cleaning purposes have resulted in the incidence of residual ABS in streams. As an objective, the ABS

concentration should not exceed 0.5 ppm in water used for domestic purposes.

pH - The pH value, for practical purposes, refers to acidity or alkalinity, and is a measure of intensity rather than quality. The pH scale extends from zero (very acidic) to 14 (very alkaline), with the middle value of 7 corresponding to neutrality at 25°C Centigrade.

APPENDIX

IMPLEMENTATION OF WATER AND SEWAGE WORKS PROGRAMS

Currently, there are three general methods which may be utilized for implementing sewage and water works programs. These are: 1) to enter into an agreement with the OWRC for the construction of the treatment and collector works with an obligation to pay the debt retirement and operating charges over the term of the agreement with the facility reverting to the municipality at the end of the term of the agreement, 2) by requesting the provision of service from a Provincially-owned project, and 3) by proceeding with the construction independently and meeting capital costs by the sale of debentures.

OWRC/MUNICIPAL PROJECTS

For the construction of water and sewage works under agreement with this Commission, the works are provided and developed under Sections 39 to 46 of the Ontario Water Resources Commission Act.

For this type of arrangement, the Commission utilizes a sinking fund and consequently the annual payments are based on a specific debt retirement period and the payments are unchanged for the period of the agreement. This type of project may be financed over a period of time up to a maximum of thirty years. The annual charges for projects constructed under this agreement are determined as follows:

1. Capital Repayment

As noted, OWRC financing is by the sinking fund method and an annual payment of approximately 2 per cent of the capital

cost is required to retire a debt over a thirty-year period.

2. Interest

On new Commission projects, interest is calculated at the current rate.

3. Reserve Fund

To provide money for repairs and replacements, Section 40 of The Ontario Water Resources Commission Act provides for the establishment of a reserve fund by the Commission. It is important to note that this fund is established in the name of the municipality and the balance consequently earns interest. It has now been established by Commission minute that the reserve fund billing for each project shall continue only until the fund reaches an amount of ten times the initial annual billing and the reserve fund billing shall be re-imposed only when the fund has been depleted to 80 per cent or less of the maximum amount.

4. Operating Costs

Under OWRC agreement, the municipality is responsible only for the operating costs directly attributed to the project in the municipality. Therefore, no charges are made by the Commission for the services of head office personnel who are available as required to advise on the satisfactory operation and maintenance of the project.

PROVINCIALY-OWNED WORKS

In June, 1967, the Honourable J. R. Simonett, Minister of Energy and Resources Management, made an announcement which expanded the authorization of this Commission for the provision of water supply and sewage treatment facilities. This new program allows the Commission to construct entire water and sewage works facilities for small municipalities. The capital costs of these can be amortized over a 40 year period.

A slight variation of this program could be implemented in that the municipality may request that this Commission provide only the major water and sewage works facilities as Provincially-owned works, and develop the water distribution and sewage collector systems under the standard type of Commission project. It would appear that where applicable, it would be more advantageous for the municipality to proceed on the basis of requesting this Commission to develop entire systems as Provincially-owned works.

The associated cost of supplying these works, including amortization of capital costs, together with operating and maintenance charges, will be recovered by the sale of service to the affected municipalities by rates determined on a usage basis. These facilities will be wholly-owned by the Province of Ontario and the arrangements for service will be formalized by contracts between the Commission and the municipality concerned. The installations will be operated entirely at cost with appropriate provision for adjustment in rate.

DEVELOPMENT

If a municipality, after considering the alternatives, wishes this Commission to consider Provincially-financed projects, application forms should be completed and submitted together with a resolution of the Municipal council. A draft of the suggested wording of the resolution is included with the application forms.

If the proposed works are to be built by the municipality on its own initiative or as a formal project under agreement with this Commission, it is required that the Council retain a consulting engineer to prepare preliminary engineering reports on the proposed work. If a Provincial system is contemplated, no action should be taken with respect to retaining a consulting engineering firm as the Commission will designate a consulting engineer to carry out the Provincial portion of the work and it would be advantageous if the municipal portion be studied and reported on by the same engineer.

TOWNSHIP OF ESQUESING

CREDIT RIVER AND TRIBUTARIES

STREAM SAMPLE RESULTS

TABLE I

SAMPLING POINT NO.	DESCRIPTION	DATE	5-DAY	SOLIDS			TURBIDITY IN SILICA UNITS	PHENOLS		ANIONIC DETERGENTS		ETHER SOLUBLES	PH AT LAB	M.F. COLIFORM COUNT PER 100 ML
			BOD (PPM)	TOTAL (PPM)	SUSP. (PPM)	DISS. (PPM)		AS	PPB	AS	ABS			
CR-25.0	CREDIT R. 50'													
	DOWNSTREAM FROM													
	DITCH CARRYING													
	WASTES FROM APPLE	Nov. 14/62	4.4	302			10	0		-		0	8.3	560
	PRODUCTS (GLEN	OCT. 25/66	2.9	318	3	315	-	-		0.0		-	8.9	107,000
	WILLIAMS) LTD.	JULY 27/67	1.2	334	85	249	-	-		0.0		-	-	1,050
CR-25.01	CREDIT R. UP-													
	STREAM FROM DITCH													
	CARRYING WASTE													
	FROM APPLE													
	PRODUCTS LTD.	Nov. 14/62	3.6	316	-	-	8.5	0		-		0	8.3	380
CR-25.3	CREDIT R. AT	MAY 28/58	3.2	274	10	-	-	-		-		-	-	30
	BRIDGE EAST OF	SEPT. 29/59	4.2	286	-	-	10	-		-		-	-	90
	MOUNTAINVIEW RD.	JUNE 9/60	1.6	224	-	-	9	-		-		-	-	<10
		JAN. 26/61	1.5	320	-	-	1	-		-		-	-	89
		SEPT. 11/62	2.6	272	-	-	8.0	-		-		-	-	3,000
		OCT. 15/63	2.7	268	-	-	1.0	-		-		-	-	-
		SEPT. 15/64	1.9	308	-	-	2.6	-		-		-	-	270
		OCT. 25/66	1.3	302	1	301	-	-		0.0		-	8.9	50
		JULY 27/67	1.6	304	73	231	-	-		0.0		-	-	680
CR-25.9	CREDIT R. 50'													
	DOWNSTREAM FROM													
	BEAUMONT KNITTING	Nov. 14/62	10	314	-	-	11.5	0		-		TRACE	8.2	380
	MILLS.	JULY 27/67	1.4	258	4	254	-	-		0.0		-	-	7,700

TOWNSHIP OF ESQUESING

TABLE I (CONTD)

SAMPLING POINT No.	DESCRIPTION	DATE	5-DAY	SOLIDS			TURBIDITY IN SILICA UNITS	PHENOLS AS PPB	ANIONIC		ETHER SOLUBLES	PH AT LAB	M.F. COLIFORM COUNT PER 100 ML
			BOD (PPM)	TOTAL (PPM)	SUSP. (PPM)	DISS. (PPM)			DETERGENTS AS ABS	ABS			
CR-25.92	CREDIT R. UPSTREAM FROM BEAUMONT KNIT- ING MILLS OUTFALL.	NOV. 14/62	3.6	302	-	-	8.0	6	-	-	-	8.4	420
		JULY 27/67	1.2	240	2	238	-	-	0.0	-	-	-	132
CR-28.7	CREDIT R. AT CHINGUACOUSY- ESQUESING TOWN LINE.	MAY 28/58	2.6	272	14	-	-	-	-	-	-	-	<10
		SEPT. 29/59	4.8	314	32	-	-	-	-	-	-	-	80
		JUNE 9/60	2.4	222	-	-	3	-	-	-	-	-	<10
		JAN. 25/61	2.2	238	-	-	3	-	-	-	-	-	71
		SEPT. 11/62	1.2	276	-	-	6.5	-	-	-	-	-	3,000
		OCT. 15/63	2.4	284	-	-	1.7	-	-	-	-	-	28
		SEPT. 15/64	0.4	290	-	-	2.9	-	-	-	-	-	600
		JULY 27/67	1.2	270	30	240	-	-	0.0	-	-	-	304
CRSB-25.6	BLACK CREEK AT SEVENTH LINE - STEWARTOWN.	MAY 22/58	2.0	304	10	-	-	-	-	-	-	-	570
		OCT. 19/59	5.5	518	-	-	4	-	-	-	-	-	9
		JUNE 7/60	2.1	332	-	-	2	-	-	-	-	-	150
		JAN. 26/61	5.7	576	-	-	2	-	-	-	-	-	5,400
		SEPT. 11/62	1.7	570	-	-	1.8	-	-	-	-	-	5,300
		OCT. 16/63	3.0	588	-	-	0.9	-	-	-	-	-	-
		SEPT. 22/64	8.4	598	-	-	1.7	-	-	-	-	-	160
		JULY 27/67	1.1	510	4	506	-	-	0.0	-	-	-	108
CRSB-27.6	BLACK CREEK AT SIXTH LINE LOWER BRIDGE.	MAY 22/58	2.0	304	10	-	-	-	-	-	-	-	570
		OCT. 19/59	5.5	518	-	-	4	-	-	-	-	-	9
		JUNE 7/60	2.1	332	-	-	2	-	-	-	-	-	150
		JAN. 26/61	5.7	576	-	-	2	-	-	-	-	-	5,400
		SEPT. 11/61	1.7	570	-	-	1.8	-	-	-	-	-	5,300
		OCT. 16/63	3.0	588	-	-	0.9	-	-	-	-	-	-
		SEPT. 22/64	8.4	598	-	-	1.7	-	-	-	-	-	160
		JULY 27/67	1.0	570	1	569	-	-	0.1	-	-	-	272

TOWNSHIP OF ESQUESING

TABLE I (CONTD)

SAMPLING POINT NO.	DESCRIPTION	DATE	5-DAY	SOLIDS			TURBIDITY IN SILICA UNITS	ANIONIC DETERGENTS		PHENOLS		M.F. COLIFORM COUNT PER 100 ML
			BOD (PPM)	TOTAL (PPM)	SUSP. (PPM)	DISS. (PPM)		AS	ABS	IN	PPB	
CRSB-29.9	BLACK CREEK UPSTREAM FROM LIMEHOUSE AT SIDE ROAD WEST OF LIMEHOUSE.	MAY 22/58	4.9	554	12	-	-	-	-	-	-	200
		OCT. 19/59	8.0	708	54	-	-	-	-	-	-	50
		JUNE 7/60	2.4	486	14	-	-	-	-	-	-	540
		JAN. 26/61	8.0	790	-	-	3	-	-	-	-	39,000
		SEPT. 11/62	5.6	734	-	-	2.3	-	-	-	-	1,700
		OCT. 16/63	4.0	778	-	-	0.6	-	-	-	-	122
		SEPT. 22/64	3.5	714	-	-	4.0	-	-	-	-	340
		JULY 27/67	1.5	790	2	788	-	-	-	-	-	136
CRSB-31.6	BLACK CREEK AT THIRD LINE.	SEPT. 13/61	4.7	728	-	-	3	-	-	-	-	420
		JUNE 7/62	7.2	764	-	-	2.3	-	-	-	-	2,200
		JULY 23/62	18.0	-	-	-	9	-	-	-	-	59,000
		SEPT. 11/62	6.4	942	-	-	3.1	-	-	-	-	900
		FEB. 20/63	5.6	852	-	-	5.5	-	-	-	-	134,000
		MAY 1/63	5.7	504	9	-	-	-	-	-	-	9,500
		SEPT. 17/63	4.8	1054	2	-	-	-	-	10	-	8,700
		SEPT. 22/64	7.8	896	-	-	2.3	-	-	-	-	420
		JULY 27/67	3.6	1012	1	1011	-	0.1	-	-	-	164

TOWNSHIP OF ESQUESING
CREDIT RIVER AND TRIBUTARIES
OUTFALL SURVEY RESULTS

TABLE II

SAMPLING POINT NO	DESCRIPTION	DATE	5-DAY	SOLIDS			ANIONIC		PHENOLS IN PPB	ETHER SOLUBLES	PH AT LAB	M.F. COLIFORM COUNT PER 100 ML
			BOD (PPM)	TOTAL (PPM)	SUSP. (PPM)	DISS. (PPM)	DETERGENTS AS	DETERGENTS ABS				
GW-2 I	PROCESS WASTES FROM APPLE PRODUCTS LTD.	NOV. 24/58	648	1888	80	-	-	-	-	-	-	-
		NOV. 14/62	760	1452	108	-	-	-	0	4	7.2	64,000
		MAY 28/64	13,800	-	1684	-	-	-	-	-	4.0	-
		OCT. 25/66	1,660	3274	152	3122	-	-	-	0.0	6.6	4,600,000
		MAR. 2/67	2,700	4534	386	4148	COMPOSITE SAMPLE 3:00-5:00 PM			-	5.2	-
		MAR. 3/67	1,440	2584	96	2488	COMPOSITE SAMPLE 3:00-5:00 PM			-	5.9	-
GR-25.9 I	INDUSTRIAL SEWER- BEAUMONT KNITTING MILLS.	NOV. 27/58	2,520	4030	592	-	-	-	-	-	-	-
		APR. 16/59	2,750	6320	1960	-	-	-	500	2055	-	-
		NOV. 14/62	3,350	8272	1982	-	-	-	1,000	4200	6	5,200
		MAY 28/64	420	-	30	-	6	-	-	-	-	-
		JAN. 5/66	90	644	50	594	1.5	-	-	64	7.3	-